

Nepalese Soapnuts

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The Soapnut

The soapnut, also commonly known as a soapberry or washnut, is the fruit from the tree *Sapindus mukorossi*^[1]. *Sapindus mukorossi*, known as the Ritha tree in Nepal^[2], is a deciduous tree that is grown in the lower foothills and midhills of the Himalayans^[3], up to altitudes of 4000 feet^[4]. It is tolerant to reasonably poor soil, can be planted around farmers' homes^[5], and one Ritha tree can produce 30-35 kg of fruit per year^[6]. Due to the characteristics outlined above, it is an ideal crop for subsistence hillside farmers in Nepal, and the product has many uses for the Nepalese and Canadians.

Uses

The value of the tree mostly comes from its fruit, which can be used for many pharmacological and cleansing purposes including, but not limited to, the ones outlined below^[1]. The multi-purpose nature of the soapnut is undoubtedly beneficial to Nepalese subsistence families, since their crop can provide them with many personal uses beyond just income from selling their product.

Cleanser/insecticide.

The soapnut contains the compound of saponins, which has natural cleansing properties, and therefore the soapnut can be used as a cleanser for hair, skin, and clothing^[3]. These saponins are also useful as insecticide, for purposes such as removing head lice off of the scalp^[1].

Medicinal.

Upadhyay and Singh^[1] have suggested that the soapnut can also be used as a natural remedy for many health problems, such as for treating migrane headaches, or for dermatological purposes such as using the seeds to remove skin impurities like pimples or eczema.

Surfactant.

Methods of extracting the maximum amount of oil from existing oil reserves has become a scientific focus in a world that has become dependent on fossil fuels. Researchers have found that the Ritha fruit can be used in an enhanced oil recovery technique ^[7]. More specifically, Chhetri, Watts, Rahman, and Islam (2009) found that extracts from the soapnut can be used as an organic surfactant to increase the mobility of oil from the fields. In addition, researchers have demonstrated the potential for the soapnut to be used as a natural surfactant for washing arsenic from soils that are rich in iron ^[8].

Other Benefits to Producers

The Non-timber Forest Products (NFTPs) sub-sector makes up about 5% of Nepal's GDP, and in some rural foothills, NFTPs can make up 50% of a subsistence farmers' family income ^[6]. Poudel (2011) has concluded that the soapnut tree is one of the 10 most important NFTPs in Nepal, and efforts should be made to increase the promotion of this product.

Researchers have previously rated the Ritha tree on a five-point scale to compare it to other Nepalese NFTPs ^[6], and it was rated at the top end of the scale for regeneration properties, social acceptance, and quality improvement potential. According to Poudel (2011), the tree was also rated fairly well for ease of cultivation. These favourable ratings suggest that the Ritha tree is highly regarded as an export product by researchers.

Production and Environment.

The production of soapnuts can fit easily into a farmer's subsistence lifestyle. The Ritha tree can be grown around houses, and there should be wide-spacing between the trees ^[5]. This wide-spacing would be a benefit to farmers, as they could intercrop with other plants. In addition, because the tree is a perennial ^[9], farmers can benefit from the crop without having to

plant every year. Also, in terms of processing before exporting, the fruit only needs to be dried on the roof of farmer's homes ^[10], thus storage and shipment does not become an issue since the product is dry. It would appear that the production also has minimal impact on the environment due to low input and processing, and roots that mount in poor soils on hills, which could reduce erosion. It appears that the soapnut has great potential for farmers and does not negatively impact the environment.

Other Considerations.

There are a few considerations when deciding to produce soapnuts. The results of a Community Forestry Development Project have shown that Ritha trees growing on individual farmer's land, in 1981-1982, had a survival rate of 43% ^[5] and more recently researchers have concluded that a large proportion of the Ritha tree mortalities occur in the seedling stage ^[9]. This suggests that farmers may experience loss of crops and no gains when first beginning to plant the trees. However, micropropagation methods followed by transfer to the natural environment have proven successful in the past ^[9]. Another potential drawback is the low sales price of soapnuts from the producer, at about eight Nepalese rupees per year, per tree ^[6]. However, due to the relatively low level of maintenance and labour input required, farmers can potentially plant a larger number of Ritha trees in order to gain more income off of the product.

Export Potential

The Western world currently favours eco-friendly products, and thus the organic multi-purposes of the soapberry could be highly desired in Canada for use in the home for cleaning or personal care, or even by companies as a natural surfactant. Soapnuts can be sold to small companies that can then sell the product to chains or process the fruit into detergents. An example of a Canadian buyer is the company *Earth's Berries*, based in Collingwood, Ontario.

This company employs thousands of farmers to grow soapnuts, and employs others to aid in the processing of the soapnuts ^[10]. Owner Karen Salcedo can be contacted toll free at 1-855-807-0781. Similarly, another buyer could be *Superior Soapnuts*, based near Thunder Bay, Ontario. This company sells their product to larger chain health food stores, and to individual consumers ^[11]. This buyer can be contacted by email at superiorsoapnuts@sympatico.ca. Alternatively, Nepalese soapnuts can be bought directly by larger health food stores in Canada, such as *The Wholesome Market*. *The Wholesome Market* sells organic products including personal care and cleaning products, and is located on a busy commercial street in Toronto, Ontario ^[12]. This buyer could sell the soapnuts, or process the soapnuts into cosmetics, detergents, or skin care products. This buyer can be contacted at 416-690-9500.

A barrier to trade that has been identified for Nepalese producers is inadequate market information ^[13]. Direct communication between the producer and these Canadian entrepreneurs and businesses can overcome this constraint. There are countless numbers of small companies and health-food markets across Canada that could be potential importers of soapnuts, making the soapnut a valuable export product for Nepalese farmers.

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